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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,254	10/22/2003	Steven K. Grumbine	00083DIV	5442

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EXAMINER

CHEN, KIN-CHAN

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,254

Applicant(s)

GRUMBINE ET AL.

Examiner

Kin-Chan Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of 1-13 and 23-26 is acknowledged. The traversal is on the ground(s) that the examination of the existing claims would not constitute a serious burden. This is not found persuasive because it involves different search and would impose a serious administrative burden on the examiner, it requires restriction / election. Applicant may submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention. The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The disclosure is objected to because of the following informalities:
Updating the status of U.S. Application No. 09/609,480 (the prior application) on page 1 of the specification is required.

Information Disclosure Statement

3. The information disclosure statement filed October 22, 2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because a copy of previously initialed PTO-1449 from another application is not acceptable.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 102

5. Claims 1, 2, 7-13, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Allman et al. (US 6,541,383).

In a method for polishing a substrate feature, Allman teaches that a polishing composition may be applied to a polishing pad. The polishing composition may include a solution comprising at least one functionalized alkylsilane compound in solution and at least one abrasive. The substrate may be moved into contact with a polishing pad such

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that the substrate surface feature contacts the polishing pad. As to claims 2 and 10-13, see col. 7, lines 10-35. As to dependent claims 7-9, Allman teaches that the polishing composition may include at least one metal oxide abrasive. Col. 5, lines 3-34; Fig. 1 (description in col. 6), col. 7, lines 10-47.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allman et al. (US 6,541,383).

In a method for polishing a substrate feature, Allman teaches that a polishing composition may be applied to a polishing pad. The polishing composition may include a solution comprising at least one functionalized alkylsilane compound in solution and at least one abrasive. The substrate may be moved into contact with a polishing pad such that the substrate surface feature contacts the polishing pad. As to claims 2 and 10-13, see col. 7, lines 10-35. As to dependent claims 7-9, Allman teaches that the polishing composition may include at least one metal oxide abrasive. Col. 5, lines 3-34; Fig. 1 (description in col. 6), col. 7, lines 10-47.

The above-cited claims differ from Allman by specifying well-known features (such as abrasive-containing polishing pad including at least one metal oxide abrasive in claims 3-6; solution in claims 24 and 25) to the art of semiconductor device fabrication (the examiner takes official notice) and using various compositions (claim 26). However, composition is known to be result effective variable and commonly determined by routine experiment. The process of conducting routine experimentations (optimizations) so as to produce an expected result is obvious to one of ordinary skill in the art. In the absence of showing criticality or new, unexpected results, which is different in kind and not merely in degree from the results of the prior art, it is the examiner's position that a person having ordinary skill in the art at the time of the claimed invention would have found it obvious to modify Allman by performing routine experiments (by using various compositions) to obtain optimal result and adding any of same well-known features to same in order to efficient perform polishing operation with a reasonable expectation of success.

8. Claims 1,2, 7-13, and 23-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Allman et al. (US 5,861,055).

In a method for polishing a substrate feature, Allman((col. 1, lines 1-44; col. 4, lines 58-63; col. 5, lines 9-25; lines 38-40) teaches that a polishing composition may be applied to a polishing pad. The polishing composition may include a solution comprising at least one functionalized alkylsilane compound in solution and at least one abrasive. Because the prior art is used for polishing and planarizing the surface of

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semiconductors, therefore, moving the substrate into contact with a polishing pad such that the substrate surface feature contacts the polishing pad is expected to one skilled in the art of chemical mechanical polishing. Allman teaches that the polishing composition may comprise at least one silane in solution (claims 2, 10-13, 23). As to dependent claims 7-9, Allman teaches that the polishing composition may include at least one metal oxide abrasive. As to dependent claims 24-26, see col. 4, lines 58-63; col. 5, lines 20-25, lines 31-40.


The above-cited claims differ from Allman by specifying well-known features (such as abrasive-containing polishing pad including at least one metal oxide abrasive in claims 3-6) to the art of semiconductor device fabrication (the examiner takes official notice). It would have been obvious to one with ordinary skill in the art to modify Allman by adding any of same well-known features to same in order to efficient perform polishing operation with a reasonable expectation of success.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kin-Chan Chen whose telephone number is (571) 272-1461. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 27, 2005


Kin-Chan Chen
Primary Examiner
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